

REMARKS

Reconsideration of the present application is respectfully requested. The applicants wish to thank the examiner for suggesting an amendment to claim 1, which suggestion has been followed here. Accordingly, it is believed that the §112, paragraph 1 rejection is overcome. Furthermore, the applicants wish to point out the inclusion of new claim 11, which is a presentation of previous claim 5 in independent form. Claim 10 is believed to be in condition of allowance, as it incorporates the aforementioned suggestion and all other relevant limitations of the base claim and intervening claims.

Rejection of Claims 1-4, 6 and 8 under 35 U.S.C. § 102 (b)/ § 103

Claims 1-4, 6 and 8 are rejected under 35 U.S.C. § 102 (b)/§ 103 as being anticipated by, or in the alternative, as being obvious from, Mikoshiba et al., U.S. Patent No. 5,803,974. It is submitted that this rejection is traversed.

Among the problems recognized and solved by Applicant's claimed invention is that when laser CVD (chemical vapor deposition) is used to deposit film on a substrate, the film may crack or fail to adhere to the substrate.¹ According to an aspect of Applicant's claimed invention, the substrate is pretreated with a plasma state gas in air prior to the CVD of the film.

For at least the following reasons, Applicant's claimed invention is neither anticipated by nor obvious from the cited references. By way of example, independent claims 1 and 8 require supplying the plasma gas to the substrate prior to a film formed by CVD.

Mikoshiba discloses a chemical vapor deposition apparatus, which performs a plasma CVD method (Mikoshiba, Abstract; column 1, lines 63-67). Mikoshiba does not disclose

¹ The present discussion illustrates aspects of Applicant's claimed invention. Applicant does not represent that every embodiment of Applicant's claimed invention necessarily embodies or performance the solution herein discussed.

or suggest pretreating the substrate with plasma gas prior to the CVD of film, as *inter alia* required by independent claims 1 and 8. Mikoshiba does not mention pretreating the substrate with a plasma state gas in air prior to the CVD of the film. Therefore, Mikoshiba does not disclose or suggest the recitations of independent claims 1 and 8.

In fact, Mikoshiba belongs to the prior art recognized by Applicant's disclosure, because Mikoshiba does not disclose or suggest the above-cited problems recognized and solved by Applicant's claimed invention. For example, Mikoshiba does not disclose or suggest the problem that when laser CVD (chemical vapor deposition) is used to deposit film on a substrate, the film may crack or fail to adhere to the substrate. Therefore, Mikoshiba does not even remotely disclose or suggest the recitations of independent claims 1 and 8

Claims 2-4 and 6 depend from independent claim 1 and thus incorporate novel and nonobvious features thereof. Accordingly, claims 2-4 and 6 are patentably distinguishable over the prior art for at least the reasons that independent claim 1 is patentably distinguishable over the prior art. Therefore, this rejection should now be withdrawn.

Rejection of Claims 1, 3 and 6 under 35 U.S.C. § 102 (b)/§ 103

Claims 1, 3 and 6 are rejected under 35 U.S.C. § 102 (b)/§ 103 as anticipated by, or in the alternative, as being obvious in view of Hongo, U.S. Patent No. 5,182,231. This rejection is traversed.

Hongo is directed to modifying wiring of a semiconductor device (Hongo, Abstract), such that a metal ion beam is sputtered onto a wafer prior to a laser CVD technique (Hongo, column 6, lines 6-57). The metal ion beam is for cutting a line and for window formation to the line for connection (Hongo, column 6, lines 47-50).

Hongo does not disclose or suggest pretreating using plasma on a substrate prior to CVD, as *inter alia* required by independent claims 1 and 8, and thus Hongo does not remedy the deficiencies of Mikoshiba as they related to Applicant's invention as claimed in independent claims 1 and 8. The Examiner seems to acknowledge that Hongo does not disclose or suggest this feature (Office Action, page 5).

Moreover, since Hongo does not disclose or suggest such pretreatment using plasma, Hongo is incapable of disclosing or suggesting turning the pretreating gas into a plasma state in atmosphere, as further required by independent claim 1. From this, it follows that Hongo does not suggest pretreating the substrate with a plasma state gas in air prior to the CVD of the film. Therefore, Hongo does not disclose or suggest the recitations of independent claims 1 and 8.

Claims 3 and 6 depend from independent claim 1 and thus incorporate the novel and nonobvious features thereof. Thus, claim 3 and 6 are patentably distinguishable over the prior art for at least the reasons that independent claim 1 is patentably distinguishable over the prior art. Therefore, this rejection should now be withdrawn.

Rejection of Claims 1, 3 and 6 under 35 U.S.C. § 102 (b)/§ 103

Claims 1, 3 and 6 are rejected under 35 U.S.C. § 102 (b)/§ 103 as being anticipated by, or in the alternative, as being obvious from Hongo in view of Shvets, U.S. Patent No. 6,419,752. This rejection is traversed.

Shvets discloses a device for processing a substrate that facilitates various types of processes on a substrate. Shvets does not cure the deficiencies of Hongo as they relate to independent claims 1 and 8. Therefore, it is respectfully submitted that Hongo and Shvets, even

taken together in combination, do not disclose or suggest the recitations of independent claims 1 and 8.

Moreover, there would have been no suggestion or motivation for combining Hongo and Shvets. The Examiner provides no evidence that the metal ion beam sputtering for cutting a line and for window formation to the line for connection (Hongo, column 6, lines 47-50) of Hongo is comparable to the plasma gas pretreatment. Further, even if this were so, there is no motivation for replacing the metal ion beam sputtering of Hongo with plasma gas pretreatment to arrive at Applicant's claimed invention. Therefore, it is respectfully submitted that Applicant's claimed invention would not have been obvious to a person of ordinary skill in the art without impermissible hindsight reconstruction based on Applicant's own disclosure.

Claims 3 and 6 depend from independent claim 1, and thus incorporate novel and nonobvious features thereof. Accordingly, claims 3 and 6 are patentably distinguishable over the prior art for at least the reasons that independent claim 1 is distinguishable over the prior art. Therefore, this rejection should now be withdrawn.

Rejection of Claims 2, 4 and 8 are rejected under 35 U.S.C. § 103

Claims 2, 4 and 8 are rejected under 35 U.S.C. § 103 as being obvious from Hongo and Shvets in view of Tsuchimoto, U.S. Patent No. 4,123,316, Ono, U.S. Patent No. 5,108,535 and/or Mikoshiba. This rejection is traversed.

Hongo and Shvets in view of Tsuchimoto, Ono, and/or Mikoshiba, do not disclose or suggest turning pretreating gas into a plasma state prior to CVD of film, as *inter alia* required by independent claims 1 and 8. Thus, Tsuchimoto and Ono, even taken together in combination, do not cure the deficiencies of the previously discussed references as they relate to Applicant's

taken together in combination, do not disclose or suggest the recitations of independent claims 1 and 8.

Moreover, there would have been no suggestion or motivation for combining Hongo and Shvets. The Examiner provides no evidence that the metal ion beam sputtering for cutting a line and for window formation to the line for connection (Hongo, column 6, lines 47-50) of Hongo is comparable to the plasma gas pretreatment. Further, even if this were so, there is no motivation for replacing the metal ion beam sputtering of Hongo with plasma gas pretreatment to arrive at Applicant's claimed invention. Therefore, it is respectfully submitted that Applicant's claimed invention would not have been obvious to a person of ordinary skill in the art without impermissible hindsight reconstruction based on Applicant's own disclosure.

Claims 3 and 6 depend from independent claim 1, and thus incorporate novel and nonobvious features thereof. Accordingly, claims 3 and 6 are patentably distinguishable over the prior art for at least the reasons that independent claim 1 is distinguishable over the prior art. Therefore, this rejection should now be withdrawn.

Rejection of Claims 2, 4 and 8 are rejected under 35 U.S.C. § 103

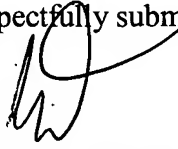
Claims 2, 4 and 8 are rejected under 35 U.S.C. § 103 as being obvious from Hongo and Shvets in view of Tsuchimoto, U.S. Patent No. 4,123,316, Ono, U.S. Patent No. 5,108,535 and/or Mikoshiba. This rejection is traversed.

Hongo and Shvets in view of Tsuchimoto, Ono, and/or Mikoshiba, do not disclose or suggest turning pretreating gas into a plasma state prior to CVD of film, as *inter alia* required by independent claims 1 and 8. Thus, Tsuchimoto and Ono, even taken together in combination, do not cure the deficiencies of the previously discussed references as they relate to Applicant's

invention as claimed in independent claims 1 and 8. Therefore, this rejection should now be withdrawn.

Wherefore, based upon the foregoing, it is submitted that the application is in condition of allowance and a relatively early reply to this paper would be appreciated.

Respectfully submitted,



Richard J. Danyko
Registration No. 33,672

Scully, Scott, Murphy & Presser, P.C.
400 Garden City Plaza
Suite 300
Garden City, New York 11530
(516) 742-4343

RJD/ej